

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BERNHARD LETTMANN,
ANDREAS DOPP, MICHAEL GRABBE
and HENRIK RAVN

Appeal 2008-1185
Application 10/432,070
Technology Center 1700

Decided: February 29, 2008

Before BRADLEY R. GARRIS, THOMAS A. WALTZ, and CATHERINE
Q. TIMM, *Administrative Patent Judges*.

WALTZ, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 6-13 and 15, which are the only claims pending in this application. This Board has jurisdiction under 35 U.S.C. § 6(b).

According to Appellants, the invention is directed to a process for coating uncoated plastic surfaces and old coatings using an adhesive primer.

The adhesive primer is based on an aqueous polyurethane resin (App. Br.

2).¹ Independent claim 6 is illustrative and is reproduced below:

6. A process for coating uncoated plastics surfaces and old coatings by applying at least one coating material to the uncoated plastics surfaces or the old coatings and curing the resulting coating film(s), which comprises

applying an aqueous, clear and transparent, physically curable, pseudoplastic or thixotropic, polyurethane-based adhesion primer to the uncoated plastics surface or the old coating,

physically curing the applied primer, optionally assisted by oxygen, heat, or exposure to actinic radiation, and

overcoating the applied primer with at least one further coating material.²

The Examiner relies on the following prior art as evidence of unpatentability³:

Totty	4,157,994	Jun. 12, 1979
Hartung	5,368,944	Nov. 29, 1994
Mormile	5,578,675	Nov. 26, 1996

Claims 6-8, 10, 13, and 15 stand rejected under 35 U.S.C. § 102(b) as anticipated by Hartung and Mormile (Ans. 3). Claims 6-10, 12-13, and 15

¹ We refer to and cite from the Amended Appeal Brief dated Mar. 9, 2007.

² We note that claim 6 in the Appendix to the Brief is incorrect (*see the Appendix to the Answer*).

³ The three cited references formed the basis of the rejections in the Final Office Action. The Examiner cited six additional references in her Answer for providing further support on the same issues at bar. However, since these additional references were not recited in the statement of the rejection, we will not consider these references as part of the Examiner's evidence of obviousness. *See In re Hoch*, 428 F.2d 1341, 1342 n.3 (CCPA 1970).

stand rejected under 35 U.S.C. § 103(a)⁴ as obvious over Hartung in view of Mormile (Ans. 3 and 6). Claim 11 stands rejected under 35 U.S.C. § 103(a) as obvious over Hartung in view of Mormile and in view of Totty (Ans. 7).

Appellants contend that Hartung fails to teach a physically curable or a clear and transparent coating, and that Mormile, in the § 102(b) rejection, would only be available to “elucidate” but not expand the disclosure of Hartung (App. Br. 5). Appellants also argue a distinction between the construction of the terms “adhesive primer” and “basecoat” (Reply Br. 2-4).

The Examiner asserts that Hartung teaches a process of coating uncoated plastic surfaces and original finishes of automobiles, comprising applying a basecoat of an aqueous polyurethane-based dispersion by spraying, flashing the coating, and overcoating with a clear coat (Ans. 3-4). The dispersion may optionally contain other water-thinnable resins, including amino resins (Ans. 4). The Examiner asserts that the coating in Hartung is inherently pseudoplastic (Ans. 4-5). The Examiner also asserts that the coating is physically curable, because the dispersion is substantially identical in structure and composition to the claimed dispersion and cures by drying to drive off solvent with assistance of heat, not by cross-linking (Ans. 5). The dispersion can be clear because it can contain iron oxide pigments, among others, and it is known in the art that iron oxide pigments include transparent colored pigments, as taught by Mormile (*id.*).

⁴ In the Final Office Action, claims 6-8, 10, 13, and 15 were rejected under 35 U.S.C. § 103(a) in the alternative to the rejection of the same claims under § 102(b). Claims 9 and 12 were rejected separately, but also under § 103(a) citing the same prior art references and the same arguments as the prior § 103(a) rejection. We hereinafter treat the 103(a) rejection over Hartung in view of Mormile of claims 6-10, 12, 13, and 15 together.

ISSUES ON APPEAL

1. Whether Appellants have shown that the Examiner reversibly erred in rejecting claims 6-8, 10, 13, and 15 as anticipated by Hartung, as explained by Mormile?
2. Whether the Appellants have shown that the Examiner reversibly erred in finding claims 6-10, 12-13, and 15 as obvious over Hartung in view of Mormile?
3. Whether the Appellant has shown that the Examiner reversibly erred in finding claim 11 as obvious over Hartung in view of Mormile and in view of Totty?

FINDINGS OF FACT (FF)

1. Hartung describes a process for applying a pigmented surface coating, referred to therein as a 'basecoat', based on a water-thinnable polyurethane resin. (Hartung, col. 1, ll. 9-11).
2. The polyurethane dispersion described in Hartung is substantially identical with the polyurethane resin forming the basis of the adhesive primer of the claimed invention. (Ans. 5; Hartung, col. 2, ll. 21-53; Specification 4:30-5:15).
3. In exemplifying the preparation of basecoats, Hartung describes use of a cross-linking agent, namely melamine – formaldehyde resin, trademarked Cymel 327[®]. (Hartung, col. 7, ll. 39-42; App. Br. p. 4).
4. Hartung describes a drying step of the 'basecoat' prior to application of subsequent coating layers on the basecoat. (Hartung, col. 7, ll. 65-67).

5. Hartung describes a thermal ‘baking’ step, subsequent to the application of all layers of a coating. (Hartung, col. 8, ll. 6-8).
6. The basecoat in Hartung incorporates various classes of pigments, including iron oxide pigments. (Hartung, col. 5, ll. 17-25).
7. Conventional iron oxide pigments include those that are transparent when formulated in a surface coating. (Mormile, col. 16, ll. 44-60).
8. Hartung describes the application of a basecoat to unfinished substrates, including metal, wood, plastic or paper (Hartung, col. 6, ll. 24-26), or to previously finished substrates. (Hartung, col. 5, l. 62 – col. 6, l. 7).

PRINCIPLES OF LAW

During examination, the claims must be interpreted as broadly as their terms reasonably allow. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1369 (Fed. Cir. 2004). However, the broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. *In re Cortright*, 165 F.3d 1353, 1358, (Fed. Cir. 1999).

A patent cannot issue if the invention was described in a patent or printed publication more than one year prior to the application filing date. 35 U.S.C. § 102(b). To reject an application under § 102(b), the Examiner has the burden of identifying a single prior art reference describing each and every element, either expressly or inherently, of the claimed invention. *Verdegall Bros. Inc. v. Union Oil of California*, 301 F.3d 1343, 1349 (Fed. Cir. 2002). Other references or extrinsic materials may be cited in the rejection to explain an element in the cited prior art reference, as long as

they are not used to expand on the teachings of the primary reference. *In re Baxter Travenol Labs.*, 952 F.2d 388, 390 (Fed. Cir. 1991).

It is well settled that if a reference does not disclose a specific embodiment which satisfies all of the claim limitations, the reference will nonetheless describe the claimed invention within the meaning of § 102(b) if it “clearly and unequivocally ... [directs] those skilled in the art to [the claimed invention] without *any* need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference.” *In re Arkley*, 455 F.2d 586, 587 (CCPA 1972). Whether a reference provides clear and unequivocal direction to the claimed invention is determined on the total circumstances with respect to the disclosure of the reference, *see In re Petering*, 301 F.2d 676, 682 (CCPA 1962), including “not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom.” *In re Preda*, 401 F.2d 825, 826 (CCPA 1968); *see also In re Graves*, 69 F.3d 1147, 1152 (Fed. Cir. 1995), and cases cited therein (a reference anticipates the claimed method if the step that is not disclosed therein “is within the knowledge of the skilled artisan.”). Such direction is provided to one of ordinary skill in the art where the totality of the reference provides a “pattern of preferences” which describes the claimed invention without the necessity for judicious selection from various disclosures thereof. *See In re Sivaramakrishnan*, 673 F.2d 1383, 1384 (CCPA 1982); *In re Schaumann*, 572 F.2d 312, 316-17 (CCPA 1978); *Petering*, 301 F.2d at 681-82.

Under 35 U.S.C. § 103, the factual inquiry into obviousness requires a determination of: (1) the scope and content of the prior art; (2) the differences between the claimed subject matter and the prior art; (3) the level

of ordinary skill in the art; and (4) secondary considerations, if any. See *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). “The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1740 (2007). “[W]hen a patent ‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.” *KSR*, 127 S. Ct. at 1741, quoting *Sakraid v. AG Pro, Inc.*, 425 U.S. 273, 282 (1976).

ANALYSIS

Claim Construction

Appellants argue for a distinction between the terms “adhesive primer,” as used in this application and in other references cited by Appellants, and “basecoat” (Reply Br. 2-4). Appellants do not explicitly apply this distinction, but we assume it is intended to distinguish their adhesive primer from the “basecoat” disclosed in Hartung. Essentially, Appellants argue that an “adhesive primer,” as they have used that term, means the first or initial layer of a series of coatings, applied to an unfinished substrate (e.g., metal, wood, plastic) or a previously applied finish in need of refinishing, while a basecoat is one or more subsequent pigmented layers applied to the first adhesive primer layer to provide a color layer. We do not necessarily disagree with Appellants' characterization of its construction of these terms. However, we disagree that these distinctions were intended by Hartung for their invention. Hartung describes basecoats which can be applied directly to a variety of substrates, including plastic (FF

8), as well as to suitable primers. Accordingly, the basecoat of Hartung can function as an adhesive primer as well as a basecoat, as construed by the Appellants. Giving the broadest reasonable scope to this claim term, we find “adhesive primer” reads on the basecoat described in Hartung.

Rejection under 35 U.S.C. § 102(b)

The Examiner asserts that Hartung anticipates and describes each and every element of the invention of claim 6. The Appellants dispute the Examiner’s findings of anticipation, asserting that Hartung does not teach a physically curable coating, nor does it teach a clear coating.

In the Specification, Appellants explicitly define “physical curing” as follows:

“physical curing” denotes the curing of a layer of a coating material by filming through loss of solvent from the coating material, with linking within the coating taking place by looping of the polymer molecules of the film-forming components or of the binders (regarding the term, cf. Rompp Lexikon Lacke und Druckfarben, Georg Thieme Verlag, Stuttgart, New York, 1998, “binders”, pages 73 and 74). Alternatively, filming takes place by way of the coalescence of binder particles (cf. Rompp. op. cit., “curing”, pages 274 and 275). Normally, no crosslinking agents are required for this purpose. If desired, the physical curing may be assisted by atmospheric oxygen, by heat, or by exposure to actinic radiation.

Spec. 3 [emphasis added].

The Specification defines “physical curing” as the removal of solvent from the coating material, leading to linking within the coating by looping of the film-forming components (i.e., the polyurethane polymer chains), the binders, or the coalescence of the binders. The Specification does not

disclose which physical mechanism for linking occurs in the invention, whether by looping or coalescence, upon removal of the solvent.

In comparison, Hartung describes drying of the first applied basecoat. (FF 4). Giving this term its ordinary meaning to one skilled in the art, the term ‘drying’ would necessarily result in some amount of removal of solvent from the coating by evaporation. Appellants further assert that Hartung relies on cross-linking, a form of chemical curing, rather than physically curing the coating. However, Appellants also acknowledge that the cross-linking of polymer chains occurs in a subsequent baking step, referencing a step in Hartung performed after drying of the first layer and after all the remaining layers of the coating are applied. (FF 5, App. Br. 4). Thus, any cross-linking step involved in the Hartung method is in addition to, and not in place of, the drying, or the physical curing step. Appellants likewise disclose that additional curing steps may be used with their invention, including heat, oxygen or actinic (photochemical) curing subsequent to the physical curing step. (App. Br. 3, Spec. 3). One of ordinary skill in the art would understand these supplemental curing steps as involving chemical reaction and not physical curing methods, as defined in the Specification. Thus, Hartung’s description of an additional, non-physical curing step (cross-linking) does not obviate the fact that it also describes physical curing, as that term is defined in Appellants’ Specification.

Appellants also assert that Hartung does not describe or teach a clear coating, and that referencing Mormile in addition to Hartung is improper under a § 102 rejection.

In a § 102 rejection for anticipation, extrinsic evidence or documents may be referenced to explain the meaning of a primary reference, but not

to expand upon the teachings of that reference. *See Baxter Travenol Labs*, 952 F.2d at 390. Hartung describes an aqueous polyurethane resin that is pigmented, with the pigment selected from a list of pigments which includes iron oxide pigments (FF 6). Mormile discloses “transparent iron oxide” pigments that may be formulated into a surface coating (FF 7). Mormile’s disclosure merely explains the nature of one type of iron oxide pigment, the use of which is already taught in Hartung. Mormile’s disclosure only explains the disclosure in Hartung, without adding to or expanding upon it.

However, to arrive at the Appellants’ invention of a clear primer through Hartung along with Mormile, one must “pick and choose” from two long lists of available pigment compounds to arrive at a single embodiment. *See Arkley*, 455 F.2d at 587. We find this “picking and choosing” to be excessive and thus not a description of the claimed subject matter, and therefore we determine that Hartung and Mormile together do not anticipate the Applicants’ invention.

We therefore cannot sustain the Examiner’s rejection under § 102(b).

Rejections under 35 U.S.C. § 103(a)

Appellants assert that the Examiner erred in rejecting claims 6-10, 12, 13, and 15 for obviousness over Hartung in view of Mormile, essentially for the same arguments regarding the limitations, “physically curable” and “clear and transparent” as addressed in the § 102(b) rejection. Appellants further argue that the Examiner has not shown any suggestion in the prior art for combining the teachings of Mormile with that of Hartung.

Appellants’ arguments regarding a “physically curable” coating in Hartung are addressed *supra*, and, for the same reasons, we find them without merit. We also disagree with Appellants on the non-obviousness of

their invention over Hartung in view of Mormile. Hartung describes a basecoat that may be used as an adhesive primer, sharing most of the characteristics of Appellants' invention, but without teaching of a clear and transparent dispersion. Hartung does teach of use of iron oxide pigments (FF 6). Mormile teaches a surface coating for use in automobile refinishing comprising various pigments, including transparent iron oxide pigment (FF 7). The use of the conventional transparent iron oxide pigment of Mormile for the iron oxide pigment in the basecoat in Hartung would have been expected to achieve the same or similar results and perform the same function. *See KSR Int'l.*, 127 S. Ct. at 1741.

Appellants also stress that, according to their Specification, a clear coating must be transparent without turbidity so that the underlying substrate can be seen. (Spec. 4). However, Appellants have not provided any evidence or argument that transparent iron oxide pigments do not inherently have these characteristics. Despite the explicit description of a pigmented dispersion in Hartung, Appellants do not assert that their dispersion is necessarily either unpigmented or colorless. They actually point out that their invention "may comprise customary and known pigments and fillers in particularly finely divided, nonhiding form if the aim is to achieve a shift in shade." (Spec. 4).

Appellants also assert that the Examiner erred in rejecting claim 11 under 35 U.S.C. § 103 (a) as obvious over Hartung in view of Mormile and Totty. Claim 11 depends on claim 10, adding a limitation that the invention further comprises a preservative in the dispersion used in the adhesion primer. However, Appellant's arguments on claim 11 go solely to the obviousness of combining the teachings of Hartung and Mormile as grounds

for rejecting claim 10, the direct parent of claim 11. The obviousness rejection of claim 10 in view of Hartung and Mormile was addressed *supra*. As the Appellants do not address the obviousness of combining the teachings of Totty regarding a biocide, which Appellants' Specification equates with a preservative, (Spec. 27:15), we find that Appellants have not overcome their burden of showing that the Examiner reversibly erred in rejecting claim 11.

CONCLUSION

We do not sustain the rejection of claims 6-8, 10, 13, and 15 under 35 U.S.C. § 102(b). We do sustain the rejections of claims 6-13 and 15 under 35 U.S.C. § 103(a). Therefore, the decision of the Examiner is affirmed.

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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